



SELECTIVE LEVEL METER SPM-31
with TRACKING OSCILLATOR PSE-31

Appendix BN 4505, Series AH...

Order No. 8N 4505/00.87
Edition 3403 (replaces 3272)
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Wandel & Goltermann
Electronic Measurement Technology

Series Status of the Diagrams forming the
Appendix to the Service Manual for the
SPM-31/PSE-31

All circuit and component layout diagrams
are applicable to instruments of Series AH...

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INTRODUCTION TO APPENDIX

This Appendix has been produced as a separate publication to provide the service technician with essential information on the construction and circuitry of the instrument. Further servicing and permitted adjustment information is available in the Service Manual which may be obtained from your local W & G agent.

When used with the Service Manual, this Appendix may be conveniently opened at the page required and a circuit or other diagram may be referred to in conjunction with the text of the Service Manual.

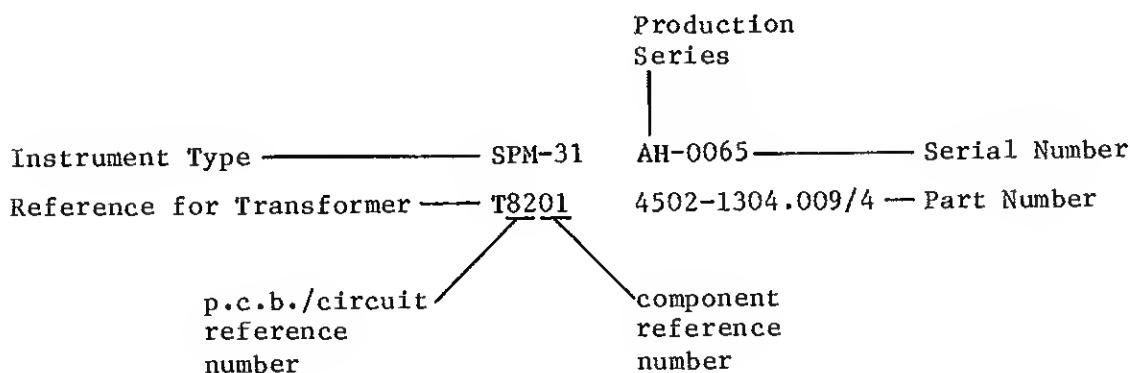
On the following pages will be found full circuit information for the SPM/PSE-31 Level Measuring Set, together with component layout diagrams and parts lists for all the units and sub-assemblies incorporated in a complete instrument.

Component Identification

Users of this Appendix are reminded of the information regarding the identification of components which may be found in Section 6.2.1 of the Service Manual.

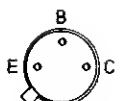
Ordering Information

When ordering spare parts it is essential to quote the type of instrument and production series, together with the serial number as well as the circuit reference and part number of the particular component required, for example:

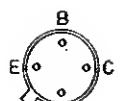


Electrostatic Sensitive Devices

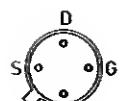
Certain semiconductor devices used within this instrument use CMOS technology and are therefore sensitive to pulses derived from discharges of static electricity. Units incorporating CMOS devices are marked with the symbol: thus indicating that care should be taken when servicing these units. In the diagram showing the pin arrangements of the semiconductors this symbol has been added to the particular devices for which this warning applies. See Section 6.1.5 in the Service Manual for information regarding the handling of these devices.



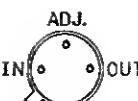
BC109
BC109C
BCY71
2N2219
2N2369A
2N2894
2N2905
2N3251
2N3947



2N918



BFW11

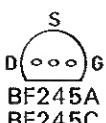


LM317

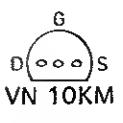


ZN423T

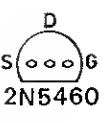
Devices above dotted line
viewed on bases



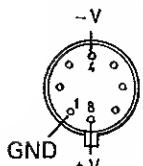
BF245A



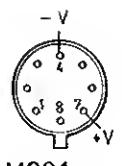
VN 10KM



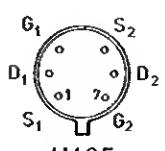
2N5460



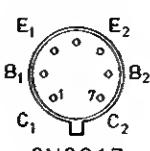
LM311
LM358 (Can
package)



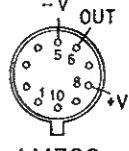
LM301
CA3130
 μ A776HC
5534 (Can
package)



U405
Diode Array
CA3039

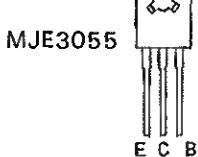


2N2917

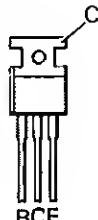


LM723

Viewed on
front



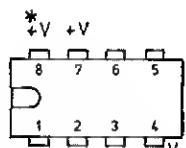
MJE3055



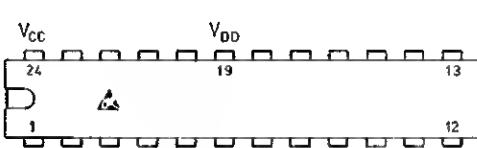
BDX33B



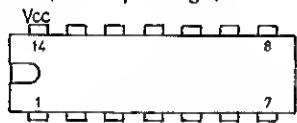
BCE



* μ A776TC
LM358 (D.I.L. Package)
5534 (D.I.L. package)



IM6654



74LS00
74LS08
GND



74LS112



LM324
3403

Devices below
dotted line
viewed on top



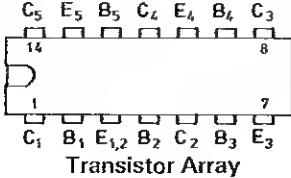
4049



{ 4001 4024 4072
4002 4025 4073
4011 4066 4075
4012 4068 4077
4013 4069 4081
4023 4070 4082
14013 }



{ 4017 4175 4543
4027 4503 4572
4040 4510 14538
4044 4518 40160
4161 4538 40175 }



Transistor Array

3086

Pin arrangements of Semi-conductor Devices used in SPM-31/PSE-31